

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

MEETING NOTES

December 18, 2002

**CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM HOUSE
PORTLAND, OREGON**

TMT Internet Homepage: <http://www.nwd-wc.usace.army.mil/TMT/index.html>

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FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Jacqueline Abel

The following notes are a summary of issues that are intended to point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the “record” of the meeting, only a reminder for TMT members.

NRCS/RFC Forecast Presentations

Tom Perkins presented information about snow pack and precipitation forecasts, as well as information about soil moisture deficit measurements. A presentation by Harold Opitz also indicated that the deficit has been little affected by the recent precipitation, and there is a probability that it will be warm and dry through March. Graphs and data used in these presentations are available on the NWRFC website.

Winter Reliability Analysis

John Fazio of the NPPC gave TMT a power point presentation on the Council's “Power Supply Outlook Winter Seasons 2003-06”. Two key conclusions are that the council staff thinks there is little risk of a problem with power supply this winter, but the region is exposed to more risk than staff thinks is tolerable during the next three years. This paper is on the NPPC website and they are asking for comments on it. Questions can also be directed to John at 1-800-452-5161.

Chum Flow Alternatives:

Suzanne Cooper reminded TMT that BPA modeled two alternatives, using the 2000 BiOp as the driving force and chum as the priority operation. Information on this was presented at the December 4th meeting, and she sent out a follow-up email after that meeting. Subsequently, CRITFC asked that they present a third analysis done by BPA. This “Study 51” was part of a brainstorming process, but it didn't fit scoping requirements so was not included in ones considered by the Regional Forum. Roger Sheeley presented information on this third study and answered questions about it as well as the other alternatives modeled. It will be posted on the TMT website. Roger or Suzanne can also provide more details on the studies to anyone who wants them.

In response to questions, John Fazio indicated that “Study 51” does have some similarities to a proposal the Council is considering.

Action:

TMT members will study these different chum alternatives and their biological effects, and will include this item for discussion, and possible decision, at the January 8 TMT meeting.

Action:

A special work session on chum flow alternatives and models will be held from 1:30 to 3:30 on Jan. 6, 2003. John Fazio will host this session at the Northwest Power Planning Council offices in Portland.

2003 Water Management Plan Fall/Winter Update:

Final edits were made to the Fall/Winter update by the COE, based on TMT comments at the last meeting. The final version has been posted on the TMT website.

TMT Guidelines:

The IT Guidelines were approved at the November 7th IT meeting. TMT needs to review their guidelines to make sure they are consistent and it was agreed that it is timely to review TMT’s internal processes in January.

Action:

After the January 22 TMT meeting, TMT members only will reconvene for this process discussion from 1 to 3 PM. No substantive issues will be discussed or decided at that meeting, only processes. Donna Silverberg is asked to set up an appropriate location for this meeting.

CRITFC Review of 2002:

Kyle Martin summarized the key points from the CRITFC’s Post-Season Review of 2002 FCRPS operations, which was posted on the TMT website yesterday. A few of the key points were that CRITFC thinks the TMT process is flawed, and wants government to government process between tribes, states and federal agencies, yet they will continue to attend TMT because of good technical information being shared and to present their SORS. CRITFC will produce a 2002 River Operations Plan and asked for a formal review and written comments on it. Another issue discussed was the recurring request by CRITFC that federal operators comply with the requested pool operations criteria 100% of the time for Tribal fisheries. Rudd Turner indicated he does not understand the problem with the current operation, since there have not been any problems reported to the Corps and large numbers of fish have been caught.

Kyle requested that a separate one-on-one meeting happen between the COE and CRITFC about this issue take place this winter, with help from the facilitation team. Rudd agreed with this suggestion.

During questions about CRITFC’s recommendation that NOAA and USFWS consider implementation of the Nez Perce Tribe-State of Idaho Plan for summer 2003 Dworshak operations, Steve Pettit indicated that the request would be the same this year as last. He asked that TMT hear a timely presentation by the University of Idaho about their data on adults, before that request happens.

Action:

Jacqueline Abel will talk with Donna Silverberg about the request for a meeting between CRITFC and the COE and next steps to be taken.

Action:

Rudd will contact Chris Perry at the University of Idaho about making a future presentation to TMT, and will report back to TMT about this at the Jan.8 meeting.

Review Current System Conditions:

Fish: USFWS and Washington reported on fish migration status. Some chum are still present and this is the last week for surveying them.

End of chum operation. Daytime operation will be 11.3 – 11.7 for chum, and BPA asked when this could be maintained around the clock. The Salmon Managers agreed to review the last survey information on Friday, and place a call by 3PM to discuss this with the Action Agencies.

Libby Ramp Rates: The COE reported that they are attempting to do the burbot operation, if weather conditions allow. This will be in the 4,000 to 10,600 cfs range, but may drop lower or may go higher.

Action:

On Friday, December 20, the Salmon Managers will review the final survey information on chum, and then call the Action Agencies by 3PM to discuss the chum operation.

Lake Roosevelt Forum Spring Conference:

Shane Scott checked with the forum organizers, and it appears that the organizers will get something out next week allowing people to attend for a lower rate, possibly \$38. TMT has been invited to attend the April 21-23 conference in Spokane, and has been requested to hold its regular meeting on April 23 for conference attendees to observe. TMT members agreed that they would like to do so on April 23, and would start the meeting at 10AM to allow time for travel.

Next TMT Meeting, January 8, will be a teleconference:

Agenda Items:

- Chum Alternative Flows Discussion

January 6 work session on chum alternatives from 1:30-3:30 at NPPC office

January 22 TMT Meeting will be in person.

January 22 from 1–3 PM

TMT members only will meet to discuss process issues and their guidelines consistency with the new IT guidelines. Location is to be announced.

Meeting Minutes

1. Greeting and Introductions

The December 18 Technical Management Team meeting was chaired by Rudd Turner of the Corps and facilitated by Jacqueline Abel. The following is a distillation, not a verbatim transcript, of items discussed at the meeting and actions taken. Anyone with questions or comments about these minutes should call Turner at 503/808-3935.

2. NRCS/RFC Forecast Presentations.

Tom Perkins of Natural Resources Conservation Service began today's meeting with a report on Columbia Basin snowpack, as of December 17. He noted that the current snowpacks range between 17% and 95% of average, with most basins in the 40%-70% range. The bottom line is that current snowpack levels aren't great anywhere, he said, despite our recent precipitation events. The Oregon basins are particularly dry, said Perkins, and Washington isn't a whole lot better.

One bright spot, said Perkins, is the snowpack increase since December 9 – between 3% and 45%, depending on the basin you're looking at. Next, Perkins touched on snow water equivalent measurements throughout the Columbia Basin; again, he said, these are below-average throughout the basin. Perkins also provided information on year-to-date mountain precipitation; again, he said, it is below-average throughout the basin. One bright spot is the fact that percent-of-average mountain precipitation since December 1 has ranged between 34% and 173% of average. Mountain precipitation has climbed from 37% to 55% of average, overall, since December 1, Perkins said.

Over the next five days, he continued, precipitation is expected to slow down somewhat. The January-March precipitation outlook is somewhat below-normal, according to the latest forecast, he added. Perkins also provided information on soil moisture deficits at various sites in the basin, noting that, in his opinion, many areas have very dry soil due to the lack of precipitation in September and October; for that reason, runoff is likely to be less efficient than normal in 2003.

Finally, Perkins touched on the NRCS' current seasonal water supply analysis, showing the January-July water supply outlook in various basins in Oregon, Washington, Idaho, Montana and British Columbia. The bottom line is that the current forecast shows values ranging between 40% and 90% of average, with most basins in the 70%-80% range. He added that the models tend to creep closer to average as the season progresses, but at this point, the 2003 Columbia Basin water supply outlook is far from rosy.

Next up was Harold Opitz of the River Forecast Center, who began with an overhead labeled "Monthly Precipitation – November 2002." In general, precipitation throughout the Columbia Basin was less than 50% of average in November, Opitz said; things aren't looking real good. With respect to seasonal accumulated precipitation, the story is the same, Opitz said.

Opitz then moved on to "NWRFC December Water Supply – January-July, 2003." This is our mid-month forecast, he said, what it shows is 51.6 MAF at Grand Coulee, 82% of normal;

at Lower Granite, 21.9 MAF, 73% of normal, at The Dalles, 82.6 MAF, 77% of normal, assuming normal subsequent precipitation. Bear in mind that, as Tom said, there is also considerable groundwater recharge that will need to occur this year, so even if we edge up closer to normal water supply, actual runoff will be less than forecast this year, Opitz said. Have you calculated how much lower runoff might be? John Fazio asked. No, but I plan to do such an analysis toward the end of this month, Opitz said.

Opitz put up a graph showing the most recent 2003 forecast information for The Dalles. Next, he put up a graph showing what might happen if subsequent precipitation is only 75% of normal: 40.2 MAF (64% of average) at Grand Coulee, 13.9 MAF (46% of average) at Lower Granite and 59.7 MAF (56% of average) at The Dalles. I'm planning to do another run showing below-average precipitation through March, with normal precipitation after that, which would be more in-line with what the climatologists are currently forecasting for the 2003 weather pattern, Opitz said.

Opitz touched on the relationship between January-July runoff volumes at The Dalles and the Southern Oscillation Index (SOI); there is considerable variability in this data, he said, and while we don't use it in our forecasting, we do take a look at this information. With respect to the temperature outlook, he added, the current forecast is for slightly warmer than average temperatures throughout the basin.

3. Winter Reliability Analysis.

Fazio led this presentation, titled "Power Supply Outlook -- Winter Seasons 2003-2006"; working from a series of overheads, he touched on the following major topic areas:

- The functional relationship between energy supply and demand
- Regional demand vs. forecast, July 2001-December 2003 (graph)
- DSI loads (current draft forecast)
- Miscellaneous assumptions: DSI load is currently at about 22% of its fully operational level and is forecast to reach about 57% of that value by 2005; non-DSI loads increase modestly and return to forecast levels by 2004; conservation is a small contributor, growing from 100 aMW in 2004 to 180 aMW in 2006; demand reduction programs were not modeled in this analysis
- Resource assumptions – suspended construction, retirements, new resources projected to be completed
- Generating project development activity in the Northwest, by category (graph)
- Capacity additions for the Northwest (graph)
- Forecast runoff distribution for 2003 (graph)
- Water supply for 2003 (82% of average?)
- The GENESYS program – attributes and outputs
- Loss-of-load probability, simulated winter operations for each of the next four years using 300 random water and temperature conditions (in 2003, 27 of the 300 simulations showed an average curtailment of greater than 10 MW-seasons, or 9%). Fazio noted that 5% is the industry standard for tolerable loss-of-load probability.
- Impacts of dry-cold weather, February 2003 (graph)

Finally, Fazio offered the following conclusions:

- The curtailment risk for this winter (4%) is acceptable, as long as the water supply is at least 82% of average. If the water supply is lower, however, the 2003 loss-of-load probability will increase. In 2004, the risk (assuming normal water supply) rises to 7%; in 2005-6, the risk rises further, to the 15% range. Fazio emphasized, however, that this analysis is a work in progress; depending on what happens with the DSIs and demand-side programs, for example, these loss-of-load probabilities could come down.
- There may be a three-year gap in resource development (2004-2006) – during this period, market incentives may not be sufficient to stimulate additional resource development; will expose the Northwest to higher-than-desired risk of curtailment (and high electricity prices)
- Do we need to do anything? If so, what?

In response to question from Abel, Fazio said his presentation is available via the NWPPC website, or by calling him directly at 800/452-5161.

3. Chum Flow Alternatives Discussion.

Bonneville's Suzanne Cooper explained that there are two things going on with this agenda item. At the last meeting, she said, we presented the results of Bonneville's hydroregulation modeling of various chum flow alternatives, and asked that people come to today's meeting prepared to discuss the biological implications of those potential

operations. Subsequently, CRITFC asked that we present another analysis we had done with the Corps, Reclamation, NMFS and USFWS, looking at alternative operations that could sustain or enhance our progress toward meeting BiOp objectives, potentially at a lower cost, she said. We agreed to coordinate any alternatives that met our criteria through the Regional Forum process, Cooper said. This particular alternative, which Roger Schiewe is going to describe today, did not meet our criteria under that process, she said.

Schiewe distributed a handout titled “50-Year Continuous Study Results,” which summarized the outcome of Bonneville’s modeling of the various chum flow alternatives under consideration. The main alternative I’m going to be talking about today is 51, which eliminates the requirement to operate the storage projects (Libby, Hungry Horse, Grand Coulee) to meet their April 10 upper rule curve elevations, and instead operates them to a 95% confidence of refill by June 30, Schiewe explained.

What I’ve provided are summary results in terms of flows for the Biological Opinion alternative (27C), Alternative 51, and Alternative 52, the chum priority study, Schiewe explained. The last two pages of the handout show flow differences in the different modeling periods at Lower Granite, Priest Rapids, McNary and Bonneville under these three operational alternatives, he said. The bottom line is that a positive number means that the alternative produced a lower flow than the BiOp base case; a negative number means that flows would be greater under Alternative 51. At Bonneville, flows would be significantly higher under Alternative 51 than they would be under the BiOp case under low, average and high water years. Bonneville flows would also generally be higher under the chum priority operation than they would be under the BiOp operation.

Schiewe asked anyone interested in the details underlying these hydroreg summaries to call him directly at 503/230-5000. Scott Bettin added that the contents of Schiewe’s handout will be posted to the TMT homepage. In response to a question from Abel, Cooper said her sense is that today probably isn’t the appropriate meeting at which to discuss the biological implications of this information. Abel said she will place this discussion on the January 8 TMT agenda. It was further agreed that a workshop, at which more detailed discussion of the various chum flow alternatives could occur, would be a useful event; it was agreed that this workshop will take place on the afternoon of Monday, January 6 at the power Planning Council offices in Portland.

4. Final WMP Fall/Winter Update.

Turner said the final draft of the fall/winter update is being distributed at today’s meeting; it has changed slightly since the last version the TMT saw, based on TMT comments, and is now available, he said.

5. TMT Guideline Revisions.

At the last meeting, Donna Silverberg distributed these guidelines, Abel said; at that meeting, it was agreed that the TMT membership would review the TMT guidelines to ensure that the two documents are consistent. It was suggested that this topic be addressed at a process-oriented meeting some time in January, Abel said. We might be able to do it in the afternoon, following one of our regular meetings, suggested David Wills. It was agreed that the afternoon following the TMT's January 22 meeting might be an appropriate time for this discussion.

6. CRITFC 2002 Review.

Kyle Martin led this presentation, working from a handout distributed at today's meeting. He began by noting that on March 14, CRITFC submitted its 2002 River Operations Plan to the federal operators and NOAA Fisheries; despite the fact that CRITFC requested formal comments on that plan, no written comments were received from any of the federal agencies.

With respect to 2002 operations, Martin said CRITFC has the following major concerns:

- **Improved flood control operations.** Martin noted that, in 2002, the Corps' conservative flood control management forced the early evacuation of reservoir storage that could have used for spring salmon migrants. January-April systemwide drafts were 2 MAF to 3 MAF greater than the Corps' flood control plan and 3 MAF to 5 MAF greater than CRITFC's altered flood control plan. This management style jeopardized the probability that summer flow goals would be met. The tribal plan would have evacuated less water during winter using a GENESYS modeled altered flood control regime. Earlier refill in May and inflow passed in June would have created more of a natural peaking hydrograph and increasing probability of meeting summer flow targets.
- **Hanford Reach spring operations.** High flow fluctuations from Grand Coulee hindered Grant County PUD's ability to operate Priest Rapids in a manner to provide smoother flows for juvenile rearing and migration. The Bureau of Reclamation chose to ignore recommended Hanford Reach operations in CRITFC's 2002 Plan. Lessons learned: reduced flow fluctuations provide 1) more consistent rearing conditions and 2) reduced stranding of juvenile salmon.
- **Dworshak summer operations.** In June 2002, the Nez Perce Tribe, State of Idaho and CRITFC requested a balanced flow and temperature control management plan for Dworshak. The plan benefited both juveniles and adults by reserving 200 kaf of flow augmentation into September. Late spring and summer hydro-meteorological conditions plus a late spring flood control shift favored this operation. NOAA fisheries and most of the salmon managers supported this proposed plan. Most of the NPT-ID plan was implemented including a test of 10 Kcfs outflows from Dworshak during September 1-10.
- **Spill summary.** Please refer to Martin's handout (available via the TMT homepage) for CRITFC's detailed criticism of the 2002 spring and summer spill programs at the FCRPS projects.

- **Tribal spring fishery.** CRITFC submitted four SORs in April and May 2002. Relative to the CRITFC one-foot criteria, the Bonneville Pool was in compliance 63% of the time. The John Day pool was in compliance 44% of the time. The Celilo Pool was in compliance 41% of the time. Compliance was highest in the last two weeks of the fishery. Refer to the TMT's May 22 meeting notes for more details.
- **Tribal fall fishery.** During August and September, CRITFC requested that the federal operators keep Bonneville, The Dalles and John Day reservoirs within one foot of full pool and stable during the treaty fishing season. The CRITFC requests also asked for specific elevations to assist boat ramp access and stable pool elevations to minimize damage to fishing gear. The Corps countered with a commitment to a 1.5-foot operating range, with a maximum elevation at Bonneville of 76.5 feet, half a foot lower than CRITFC's requested maximum elevation. With respect to the actual operation implemented, Bonneville pool was in compliance with the CRITFC request 8% of the time, with the Corps' 1.5-foot operating range 96% of the time. The Celilo pool was in compliance with CRITFC's requested operation 61% of the time; John Day pool, 64% of the time.

Martin then provided the following summary and recommendations:

The TMT process is fundamentally flawed because there is no meaningful dispute resolution mechanism. Despite this major deficiency, the member tribes of CRITFC will continue to advocate for a process to adequately address differences and make technical recommendations for improved river operations to benefit all basin anadromous fish that must pass through the FCRPS. Specifically, we recommend that significant improvements be made for 2003 river operations as follows:

- CRITFC will produce its draft 2003 River Operations Plan and release by January 2003. We will request formal review and comments by NOAA Fisheries, USFWS, and the federal operators. These actions are consistent with those required by the Secretarial Order and the President's April 29, 1994 Memorandum for federal agencies interacting with Native American Tribal Governments.
- The Corps should consider using CRITFC's altered flood control operation (modeled in GENESYS) to manage the FCRPS reservoirs, which results in more storage in upriver reservoirs while still providing reasonable flood control protection. The Corps should review flood control management to achieve flood control flexibility which provides more storage to ensure flows for spring and summer salmon migrations. The Corps should seek timely independent, scientific review of flood control management, as required in the 2000 FCRPS BiOp.
- The federal operators should incorporate monthly climate forecast information into long-term seasonal FCRPS operations. For example, CRITFC's new water supply forecast correction curve procedure could help minimize over-drafting of FCRPS reservoirs for flood control when the water supply forecast declines, as is expected in this lower-than-average runoff El Nino year. CRITFC projects 91 MAF-97 MAF for Water Year 2003 with 85% to 90% of normal precipitation

basinwide.

- The federal operators, NOAA Fisheries and USFWS should consider implementation of the Nez Perce Tribe-State of Idaho Plan for summer 2003 Dworshak operations.
- The federal operators should meet with CRITFC requested pool operations criteria 100% of the time for the 2003 treaty fisheries. Meaningful policy discussions should be held with CRITFC and the Corps managers to reach a common understanding of the operational necessity in order to meet Tribal needs during the fishing season.
- Mitigation from the federal operators should be implemented when river operations fail to meet FCRPS BiOp requirements and other requirements for non-listed stocks. The appropriate mitigation should be developed collaboratively by the tribes plus state and federal fisheries agencies.

Various TMT participants offered clarifying questions and comments to CRITFC's list of concerns and suggested improvements. In response to a request from Martin, it was agreed that a separate meeting between CRITFC, NMFS, the Fish and Wildlife Service and the federal operators to discuss these items -- in particular, operations during the treaty fishery -- would be useful. Abel said she will ask Donna Silverberg to coordinate such a meeting. Steve Pettit further suggested that a presentation from Chris Perry of the University of Idaho on adult migration during August/September Dworshak operations, which is relevant to the Nez Perce/Idaho plan for Dworshak operations, should be scheduled for the next TMT meeting; it was so agreed.

Martin asked that any additional comments or concerns regarding the tribes' year-end review be communicated directly to him at 503/731-1314.

7. Current System Conditions.

David Wills reported that Lower Columbia River flows have increased because of the recent rains; chum counts have now passed their peak, but fish are still entering the system. Peak 2002 chum counts at Hamilton Springs were about triple the peak counts in 2001, he said. In Hardy Creek, peak count numbers were significantly lower than we saw in 2001, Wills said; this is primarily because the flow situation in November limited the ability of spawners to enter that system. Is chum spawning over? Turner asked. There is still some spawning occurring, Shane Scott replied; this is the last week of chum spawning surveys, however. In response to another question from Bettin, Scott said the state fishery managers, the Fish and Wildlife Service and NOAA fisheries will talk after Friday's final spawning survey to designate the official end of the chum spawning season, and will communicate their decision to the action agencies by late Friday afternoon. Bettin said the operating agencies would appreciate that, because it will allow additional operational flexibility. In the interim, it was agreed that the operating agencies will maintain the current 11.3-11.7-foot Bonneville tailwater elevation.

Scott also presented information on preliminary 2002 fall chinook and coho returns in the Lower Columbia, together with an outlook for 2003. He noted that this

information is available via the TMT homepage; in general, he said, it looks as though chinook returns will be lower in 2003 than they were in 2002, while coho returns are projected to be higher next year.

Moving on, Turner said Bonneville has been targeting 11.5 feet in the tailwater during the day, within a range of 11.3 – 11.7 feet; average project discharge was 121 Kcfs yesterday. Water temperature in the lower river is 46 degrees. The average flow at Lower Granite was 19 Kcfs yesterday. Dworshak elevation was 1516.8 feet as of midnight last night; the project is releasing minimum discharge, and has filled slightly since December 1. The end-of-December elevation target at that project is 1558 feet, Turner said. Libby elevation was 2419.5 as of midnight last night; the project is releasing 26 Kcfs, and is drafting about a foot per day. The December 31 elevation target at that project is 2411 feet. The Corps will ramp down Libby outflow this weekend to begin the burbot operation, Turner said; we plan to hold 7.3 Kcfs beginning Monday, December 23. The current Albeni Falls elevation is 2055.4 feet, Turner said; the project is releasing 19 Kcfs.

Turner reported that the SOI-based December forecast at Libby is 75% of normal, down from 82% in the November forecast; at Dworshak, the seasonal water supply forecast is now 2.2 MAF, according to the December forecast, also below normal. Wills said that data showing how the new models are working would be helpful; Turner replied that the Corps will provide this information when comparisons with existing models and actual volumes are available. Tony Norris reported that the current elevation at Grand Coulee is 1285.1 feet; at Hungry Horse, 3522 feet.

8. New System Operational Requests.

No new SORs were submitted prior to today's meeting.

9. Recommended Operations.

Between now and our next meeting, we will continue to target 11.3-11.7 feet at the Bonneville tailwater during the day, said Bettin; once we receive the call from the salmon managers regarding the end of chum spawning, we will switch to an operation targeting 11.3-11.7 feet around the clock. We will also be continuing to implement the burbot/power operation, Bettin said, and will do so unless a cold snap or flood control operation necessitates increased discharge from Libby. We will shoot for 7.3 Kcfs out of Libby, or less if inflows and weather conditions allow.

10. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, January 8. Scott also reported that he had contacted the Lake Roosevelt Forum regarding the payment requirement at their April conference; Andy Dunau said the Forum is developing two options, one under which participants would pay \$38 for food and refreshments, another under which participants would be on their own for food. It was

agreed that the TMT will hold its April 23 meeting in conjunction with this conference in Spokane.

Meeting summary prepared by Jeff Kuechle, BPA contractor.